

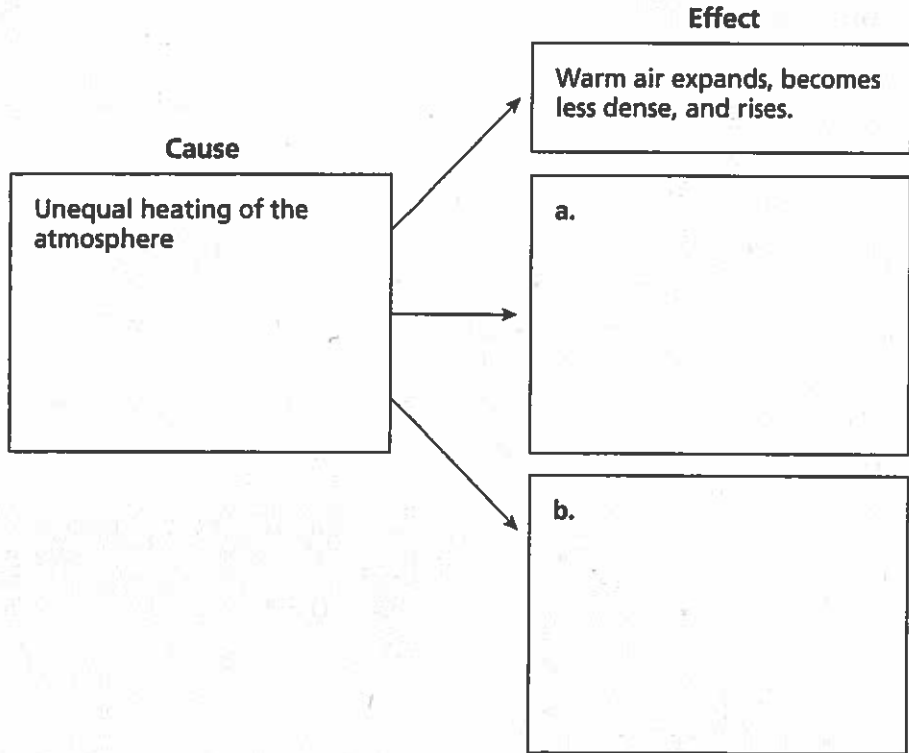
Weather Factors • *Guided Reading and Study*

Winds (pp. 552–558)

This section explains what causes winds and how winds are measured. The section also describes different types of winds that blow across Earth's surface.

Use Target Reading Skills

As you read about unequal heating of the atmosphere, fill in the graphic organizer with its effects.



What Is Wind? (p. 553)

1. The horizontal movement of air from an area of high pressure to an area of lower pressure is referred to as _____.
2. Is the following sentence true or false? Winds are caused by differences in air pressure. _____

Match the instrument with what it measures.

Instrument	What It Measures
_____ 3. wind vane	a. wind speed
_____ 4. anemometer	b. wind direction

5. Is the following sentence true or false? A south wind blows toward the south.

6. The increased cooling that a wind can cause is called the _____.

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Winds (continued)

7. Why does the wind blowing over your skin make you feel colder?

Local Winds (p. 554)

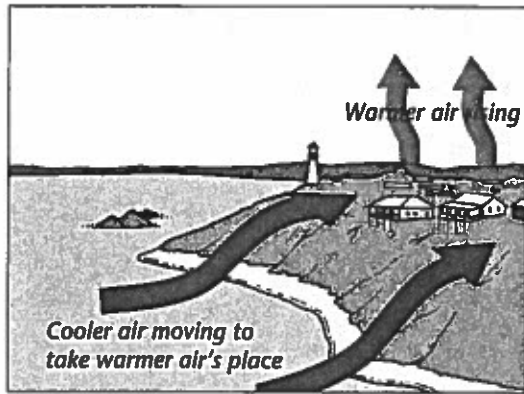
8. Winds that blow over short distances are called _____.

9. What causes local winds?

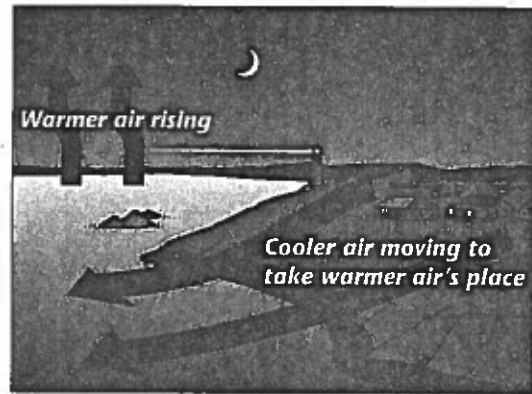
10. Circle the letter of each sentence that is true about the unequal heating of land and water.

- a. Land warms up faster than water.
- b. During the day, air over water is warmer than air over land.
- c. Water cools more quickly than land.
- d. At night, air over water is cooler than air over land.

11. Label the drawings to indicate which drawing shows a sea breeze and which drawing shows a land breeze.



a. _____



b. _____

Global Winds (p. 555)

12. Winds that blow steadily from specific directions over long distances are called _____.

13. Circle the letter of each sentence that is true about global winds.

- a. They are created by unequal heating of Earth's surface.
- b. They are produced by the movement of air between the equator and the poles.
- c. They blow in a straight line from the poles toward the equator.
- d. They curve because of Earth's rotation.

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14. As Earth rotates, the Coriolis effect causes winds in the Northern Hemisphere to turn toward the _____.

Global Wind Belts (pp. 556–558)

15. The calm areas around Earth include the _____ and the _____.

16. Complete the compare/contrast table to show the differences among the major wind belts.

Direction of Global Wind Belts	
Wind Belt	Direction It Blows
Trade winds	a.
Prevailing westerlies	b.
Polar easterlies	c.

d. Suppose you were sailing from Central America to Asia just above the equator. Which winds would help speed you on your way? _____

17. Circle the letter of each sentence that is true about jet streams.

- a. They are about 100 kilometers above Earth's surface.
- b. They are hundreds of kilometers wide.
- c. They blow from east to west.
- d. They blow at speeds of 200 to 400 kilometers per hour.